

IN THE CLAIMS

Please amend the claims as follows:

1. (original) A filament or fibre (2) comprising:
a volume modulation colouration producing substance (6);
containment means (8) for containing the substance in the form
of an elongated core which containment means is at least partially
light transmitting; and
stimulation means (4) for stimulating the substance to produce
a change in the volume of the substance, thereby changing the
colour of the filament or fibre.
2. (original) A filament or fibre as claimed in Claim 1 wherein
the substance comprises a volume modulation colorant.
3. (original) A filament or fibre as claimed in Claim 2 wherein
the volume modulation colorant comprises artificial pigment cells.
4. (currently amended) A filament or fibre as claimed in Claim 2
~~or Claim 3~~ wherein the volume modulation colorant comprises polymer
gel particles, which particles are immersed in an aqueous solution,
the polymer gel particles and aqueous solution together forming the
substance.

5. (original) A filament or fibre as claimed in Claim 3 wherein the polymer gel particles have a diameter falling within the range of 5 to 100 μm .

6. (currently amended) A filament or fibre as claimed in ~~any one of Claims 4 or 5~~Claim 4 wherein the concentration of polymer gel particles is between 5 and 40 wt%, and the gel solid content is in the range of 1 to 10 wt%.

7. (currently amended) A filament or fibre according to ~~any one of the preceding claims~~Claim 1 wherein the containment means (8) comprises an outer sheath.

8. (original) A filament or fibre according to Claim 7 wherein the outer sheath is transparent.

9. (currently amended) A filament or fibre according to Claim 7 ~~or Claim 8~~ wherein the outer sheath is formed from a flexible polymer.

10. (currently amended) A filament or fibre according to ~~any one of Claims 2 to 9~~Claim 2 wherein the stimulation means comprises

heating means for heating the substance, and the volume modulation colorant is of the type having a volume that changes with temperature.

11. (original) A filament or fibre according to Claim 10 wherein the heating means comprises an inner electrode (4) extending substantially axially through the elongate core.

12. (currently amended) A filament or fibre according to Claim 10 ~~or Claim 11~~ further comprising means for causing an electrical current to flow through the heating means.

13. (currently amended) A filament or fibre according to Claim 11 ~~or Claim 12~~ wherein the inner electrode (4) is spaced apart from the containment means by tens of μm to hundreds of μm , typically 100 μm .

14. (currently amended) A filament or fibre according to ~~any one of Claims 2 to 9~~Claim 2 wherein the stimulation means comprises electric means (22, 24) for applying an electric field across the substance, and the volume modulation colorant is of the type having a volume that changes with electric field.

15. (original) A filament or fibre according to Claim 14 wherein the electric means comprise a pair of outer electrodes (22, 24) each extending along an outer surface of the elongate core, the filament or fibre further comprising an at least partially light transmitting isolating coating (28) at least partially enclosing the electrodes.

16. (original) A filament or fibre according to Claim 15 wherein the outer electrodes (22, 24) are entwined, and extend substantially helically along the core.

17. (original) A filament or fibre according to Claim 14 wherein the electric means comprises an inner electrode (42) extending substantially axially along the core, and the containment means, which containment means comprises an outer electrode (46), the filament or fibre further comprising a light transmitting isolating coating (48), at least partially enclosing the outer electrode.

18. (currently amended) A filament or fibre according to Claim 17 wherein the outer electrode (46) comprises a conductive polymer.

19. (currently amended) A filament or fibre according to Claim 17 ~~or Claim 18~~ wherein the outer electrode (46) is transparent.

20. (currently amended) A filament or fibre according to ~~any one of Claims 17 to 19~~Claim 17 wherein the outer electrode (46) is flexible.

21. (original) A filament or fibre according to Claim 15 further comprising an inner electrode extending axially through the elongated core.

22. (currently amended) A filament or fibre according to ~~any one of the preceding claims~~Claim 1 further comprising spacer means.

23. (original) A filament or fibre according to Claim 22 wherein the spacer means comprises one or more spacer wires (72) extending substantially axially through the core.

24. (original) A filament or fibre according to Claim 22 wherein the spacer means comprises a plurality of substantially spherical beads (90).

25. (original) A filament or fibre according to Claim 24 wherein the substantially spherical beads are contained within the substance (6).

26. (currently amended) A filament or fibre according to Claim 11 ~~or Claim 21, or any claim dependent on Claim 11 or Claim 21~~ wherein the spacer means are positioned between the inner electrode (4) and the containment means (8).

27. (currently amended) A filament or fibre according to Claim 15 ~~or Claim 17, or any claim dependent upon Claim 15 or Claim 17~~ wherein the spacer means are positioned between the inner electrode (4) and the one or more outer electrodes (46).

28. (currently amended) A filament or fibre according to Claim 26 ~~or Claim 27~~ wherein the spacer means comprises one or more spacer wires extending helically along the inner electrode.

29. (currently amended) A filament or fibre according to Claim 26 ~~or Claim 27~~ wherein the spacer means comprise substantially spherical beads deposited on the inner electrode.

30. (currently amended) A filament or fibre according to ~~any one of Claims 22 to 29~~ Claim 22 wherein the spacer means are formed from a non-conductive material.

31. (currently amended) A filament or fibre according to Claim 11 ~~or Claim 21 or any claim dependent on Claim 11 or Claim 21~~ further comprising a colour layer on the inner electrode (4).

32. (currently amended) A garment formed from a plurality of filaments or fibres according to ~~any one of the preceding~~ ~~claims~~ Claim 1.

33. (currently amended) A textile formed from a plurality of filaments or fibres according to ~~any one of the preceding~~ ~~claims~~ Claim 1.

34. (original) A method of forming a fibre or filament comprising the steps of:

forming a containment means for containing a volume modulation coloration producing substance in the form of an elongate core;
associating with the containment means a stimulation means for stimulating the volume modulation coloration producing substance;
and

adding a volume modulation coloration producing substance to a space defined by the containment means; and
sealing the containment means.

35. (original) A method according to Claim 34 wherein the step of forming the containment means, and the step of associating the stimulation means with the containment means are combined into a single step comprising co-extruding a conductive material in the form of a central elongate core with a non-conductive material in the form of a first hollow elongate portion surrounding the conductive elongate core, and a second coaxial hollow elongate portion spaced apart from the first elongate portion, the first elongate portion and the second elongate portion being joined by one or more radially extending sections extending from the first elongate portion to the second elongate portion.

36. (original) A method according to Claim 35 comprising a further step of depositing on an outer surface of the outer elongate portion, a transparent conductive layer.

37. (original) A method according to Claim 36 comprising a further step of depositing on an outer surface of the transparent conductive layer, a transparent protective and isolating coating.